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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,585	09/08/2003	Dan Fraenkel	1856-33100	9875

31889 7590 10/17/2005

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EXAMINER

NGUYEN, CAM N

ART UNIT PAPER NUMBER

1754

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/657,585	<b>Applicant(s)</b> FRAENKEL, DAN	
	<b>Examiner</b> Cam N. Nguyen	<b>Art Unit</b> 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on July 21, 2005 (an amendment/response).
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) 63-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30, 32-38, 40-45, 47-49 and 51-62 is/are rejected.
- 7) ☒ Claim(s) 31, 39, 46 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/09/05</u> | 6) <input type="checkbox"/> Other: _____  |

12

## DETAILED ACTION

### **Response to Amendment**

1. Applicants' amendment and remarks, filed July 21, 2005, has been made of record and entered. Claims 1, 22-23, 30, & 32 have been amended.

Claims 1-73 are currently pending in the application.

### **Status of Withdrawn Claims**

2. This application contains claims 63-75 are drawn to an invention nonelected without traverse in Paper No. January 28, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-11, 13-28, 30, 32-36, 40-45, 47-49, 51-55, 57-60, & 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hindin et al., "hereinafter Hindin", (US Pat. 3,993,572).

Hindin discloses a composition consisting essentially of a relatively catalytically-

Art Unit: 1754

inert, solid support having coated thereon a minor amount of a catalytically active composite consisting essentially of a catalytically-effective amount of a platinum group metal selected from the group consisting of platinum, palladium, ruthenium, iridium and rhodium, added to an admixture of a rare earth metal oxide and alumina, said admixture containing alumina in an amount in the range of 70-99% by weight and selected from the group consisting of  $\gamma$ -alumina,  $\kappa$ -alumina, and  $\delta$ -alumina and containing rare earth metal oxide in an amount in the range of 1-30% by weight and selected from the group consisting of cerium oxide, lanthanum oxide, samarium oxide and praseodymium oxide, said admixture having a relatively high surface area of at least 75 m<sup>2</sup>/g and having been derived from alumina or aluminum compound and from said rare earth metal oxide or a compound of said rare earth metal which has been calcined at a temperature of at least 750°C to yield said alumina and said rare earth metal oxide (see col. 16, claim 1). The platinum group metal is incorporated in said calcined composite in an amount up to about 20% by weight of said composite (see col. 16, claim 4). Specifically, the catalyst composition is prepared by forming an intimate admixture of alumina and cerium nitrate in hydrated form then drying and calcining at a temperature of 1100°C. After that, coating a honeycomb material with the alumina and ceria support material then finally coated the platinum group metal onto the alumina and ceria-coated honeycomb by impregnation technique to obtain a catalyst composition (see col. 11, Example 1). Hindin further discloses the catalyst may also contain minor amounts of other ingredients which may or may not serve as promoters for oxidation and reduction reactions including manganese, vanadium, copper, iron, cobalt, chromium, nickel, and

the like (see col. 6, ln 36-42). Suitable aluminum and rare earth compounds including nitrates, oxalates, etc. (see col. 6, ln 53-60).

Hindin discloses the claimed catalyst support, process of preparing a catalyst support, catalyst composition, and process of preparing said catalyst composition, except for the limitation on "creating a surface coverage comprising an oxide of said rare-earth metal, said coverage coats the alumina at least partially" recited in claims 1, 21, 32, & 49.

While the reference does not teach that the surface of the alumina is at least partially coated with the rare-earth metal oxide, it is considered *prima facie obvious* to one of ordinary skill in the art that the alumina is coated with rare-earth metal oxide the same way in Hindin, in view of the same calcination temperature disclosed in both the Hindin reference and applicants' instant claims 15-16 & specification page 28, Examples 2S-6S.

Regarding claims 44-45 & 47-48, the intended use limitations in the claims are noted. While the intended use limitations in the claims are not disregarded, they have no bearing on the patentability of the claimed composition and process of making the composition per se. It is well settled that terms merely setting forth intended use for, or a property inherent in, an otherwise old composition do not differentiate the claimed composition from those disclosed in the prior art, see In re Pearson, 181 USPQ 641. Also, it is contrary to spirit and patent laws that patents be granted for old compositions of matter based on new uses of compositions where uses consists merely in employment of compositions; patentee is entitled to every use of which invention is

susceptible, whether such use be known or unknown to him, see In re Thrau, 57 USPQ 324.

5. Claims 4-5, 29, 37-38, 56, & 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hindin et al., "hereinafter Hindin", (US Pat. 3,993,572), as applied to claims 1-3, 6-11, 13-28, 30, 32-36, 40-45, 47-49, 51-55, 57-60, & 62 above, and further in view of Bellussi et al., "hereinafter Bellussi", (US Pat. 6,596,667 B2).

Hindin discloses a catalyst support, process of preparing a catalyst support, catalyst composition, and process of preparing said catalyst composition as described above, except for the following differences.

Regarding claim 4, Hindin does not disclose "the aluminum compound is gamma-alumina having a surface area and pore volume" as being claimed. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have substituted such known gamma-alumina support material of Bellussi for the alumina support of Hindin to result in a catalyst support and catalyst composition having improved in activities because it is known as useful catalyst support material as evidenced by Bellussi. Specifically, Bellussi discloses a carrier consisting of greater than 80% by weight of aluminum oxide and having an average particle diameter ranging from 120 to 180  $\mu\text{m}$ , a surface area greater than 175  $\text{m}^2/\text{g}$  and a pore volume greater than 0.35  $\text{cm}^3/\text{g}$  (see col. 10- col. 11, claim 1). Bellussi further discloses that the carrier mainly consists >80% of aluminum oxide in any phase composition selected from a

Art Unit: 1754

group including gamma, delta, theta, etc., and mixtures thereof (see Bellussi at col. 3, In 38-40).

Regarding claim 5, it is considered the claim is met by the teaching of the reference because the claim requires "no more than about 0.1% by weight  $\text{Na}_2\text{O}$ ", which provides for a minimal amount of "0%"  $\text{Na}_2\text{O}$ , and the reference does not disclose any information on this impurities or the alumina of the reference contains any  $\text{Na}_2\text{O}$  amount either.

Regarding claim 29, the claimed support properties are disclosed by the Bellussi reference (see above).

Regarding claims 37-38 & 61, Hindin does not disclose that the catalytically active metal contains the claimed promoters. Bellussi however discloses a supported cobalt-based catalyst, comprising a catalytically active phase supported on a carrier (see Bellussi at col. 10, claim 1), wherein catalytically active phase of the catalyst consists of greater than 80% by weight of cobalt (see col. 11, claim 4), and contains a promoter selected from the group of metals including the Group VIII metals (see Bellussi at col. 12, claim 15). It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated such known promoters into the catalytically active phase of Hindin to achieve a promoted catalyst because it is known and taught by Bellussi to do so.

Regarding claim 56, Bellussi does not disclose that "cobalt contains in the catalyst in the amount of between about 5 and about 40%". However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was

made to have optimized the amount of cobalt disclosed by Bellussi to result in an effective catalyst, in view of In re Boesch.

***Allowable Subject Matter***

6. Claims 12, 31, 39, 46, & 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Response to Applicants' Arguments**

7. Applicants' amendment and response filed on July 21, 2005 has been carefully reconsidered, but not deemed persuasive for the following reasons.

Applicants' urging is fully noted. It is considered the rejections are still proper for the same reasons as discussed in the rejection. There is no patentable distinction seen between the claimed subject matter and that disclosed by the prior art applied. Thus, the rejections are maintained.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the



Art Unit: 1754

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Citations**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form attached. All references are cited for related art.

CAN  
10/03/05

**Conclusion**

10. Claims 1-75 are pending in the application. Claims 1-30, 32-38, 40-45, 47-49, & 51-62 are rejected. Claims 31, 39, 46, & 50 are objected. Claims 63-75 remain withdrawn due to nonelected (distinct) invention(s). No claims are allowed.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M, W, R, & F, 9:00 AM - 6:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone

Art Unit: 1754

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CAM N. NGUYEN  
PRIMARY EXAMINER

Nguyen/cnn   
October 03, 2005

Art Unit: 1754